The Bad Side Of
Client Side

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The Client Side

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Web 1.0

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The History of Web Rendering

SSG

The History of Web Rendering

SSG

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The Gabu Case

02

The Gabu App

The Gabu App

The Gabu App

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The Gabu App

The bug

The bug

The bug

The bug

Lets dig in

Lets dig in

Lets dig in

Lets dig in

Lets dig in

Lets dig in

.ZIP → DEX (dex2jar) → JAR (jar) → JAVA

jadx

The facade

The facade

The facade

It does what?

You do what?

You do what?

You do what?

You do what?

You do what?


```json
{
    "users": [
        {
        "username": "jane_doe87",
        "full_name": "Jane Doe"
        },
        {
        "username": "john_smith92",
        "full_name": "John Smith"
        },
        {
        "username": "sarah_connor84",
        "full_name": "Sarah Connor"
        }
    ]
}
```

Wait what is that?

Wait what is that?

JSON 700 MB

Wait what is that?

JSON

700 MB

Wait what is that?


```json
{
    "users": [
        {
            "email": "john.doe@example.com",
            "role": "admin",
            "username": "johnd",
            "password_hash": "5baa61e4c9b93f3f0682250b6cf8331b7ee68fd8",
            "last_login": "2024-09-12T14:30:00Z",
            "address": "123 Main St, Anytown, AN 12345"
        },
        {
            "email": "jane.smith@example.com",
            "role": "user",
            "username": "janes",
            "password_hash": "6367c48dd193d56ea7b0baad25b19455e529f5ee",
            "last_login": "2024-09-13T09:15:00Z",
            "address": "456 Oak Ave, Somewhere, SW 67890"
        },
        {
            "email": "bob.johnson@example.com",
            "role": "user",
            "username": "bobj",
            "password_hash": "7c222fb2927d828af22f592134e8932480637c0d",
            "last_login": "2024-09-11T18:45:00Z",
            "address": "789 Pine Rd, Elsewhere, EL 54321"
        }
    ]
}
```
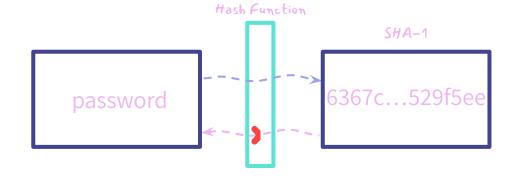
Hashes

Hash Function

SHA-1

password

6367c...529f5ee

Hashes

Hash Function

SHA-1

password

6367c...529f5ee

❌

Since 2005, SHA-1 has not been considered secure against well-funded opponents

Hashes

Hash Function

SHA-1

password → 6367c...529f5ee

Since 2005, SHA-1 has not been considered secure against well-funded opponents

Hashes

Hash Function

SHA-1

password		6367c...529f5ee
password1		87321...876ada
password2		481as...asdasdg
...		...

Hashes

Hash Function

password
password1
password2
...

SHA-1

6367c...529f5ee
87321...876ada
481as...asdasdg
...

✓

I am the admin now

```
1    {
2        "users": [
3            {
4                "email": "test123@example.com",
5                "role": "admin",
6                "username": "test123",
7                "password_hash": "448ed7416fce2cb66c285d182b1ba3df1e90016d",
8                "last_login": "2024-09-13T09:15:00Z",
9                "address": "test address"
10           }
11       ]
12   }
```

I am the admin now


```json
1  {
2      "users": [
3        {
4            "email": "test123@example.com",
5            "role": "admin",
6            "username": "test123",
7            "password_hash": "448ed7416fce2cb66c285d182b1ba3df1e90016d",
8            "last_login": "2024-09-13T09:15:00Z",
9            "address": "test address"
10       }
11     ]
12  }
```

I am the admin now


```json
1  {
2      "users": [
3        {
4          "email": "test123@example.com",
5          "role": "admin",
6          "username": "test123",
7          "password_hash": "448ed7416fce2cb66c285d182b1ba3df1e90016d",
8          "last_login": "2024-09-13T09:15:00Z",
9          "address": "test address"
10       }
11     ]
12  }
```

Hash Function

SHA-1

test12345   448ed...e90016d

I am the admin now


```json
1  {
2      "users": [
3        {
4          "email": "test123@example.com",
5          "role": "admin",
6          "username": "test123",
7          "password_hash": "448ed7416fce2cb66c285d182b1ba3df1e90016d",
8          "last_login": "2024-09-13T09:15:00Z",
9          "address": "test address"
10       }
11     ]
12  }
```

Hash Function

SHA-1

test12345   448ed...e90016d

I am the admin now


```json
1  {
2      "users": [
3        {
4          "email": "test123@example.com",
5          "role": "admin",
6          "username": "test123",
7          "password_hash": "448ed7416fce2cb66c285d182b1ba3df1e90016d",
8          "last_login": "2024-09-13T09:15:00Z",
9          "address": "test address"
10       }
11     ]
12  }
```

Hash Function

SHA-1

test12345

448ed...e90016d

The RizzPremium Case

03

The RizzPremium App

The RizzPremium App

The RizzPremium App

Same thing

Same thing

The secret

The secret

The secret

The secret

stripe

The secret

The secret

The secret

The secret

Wait what is that?

Wait what is that?

Wait what is that?

```json
{
  "users": [
    {
      "email": "alice.wong@example.com",
      "username": "alicew",
      "message_credits": 100000,
      "last_login_ip": "192.168.1.100",
      "register_date": "2023-05-15T10:30:00Z",
      "login_date": "2024-09-13T08:45:00Z",
      "token": "ey...2X9rSrhDI5KadE5"
    },
    {
      "email": "carlos.garcia@example.com",
      "username": "carlosg",
      "message_credits": 75,
      "last_login_ip": "2001:0db8:85a3:0000:0000:8a2e:0370:7334",
      "register_date": "2024-01-20T14:20:00Z",
      "login_date": "2024-09-12T19:30:00Z",
      "token": ""
    },
    {
      "email": "emma.brown@example.com",
      "username": "emmab",
      "message_credits": 150,
      "last_login_ip": "",
      "register_date": "2022-11-03T09:15:00Z",
      "login_date": "2024-09-13T11:00:00Z",
      "token": ""
    }
  ]
}
```

Wait what is that?


```json
{
    "users": [
        {
            "email": "alice.wong@example.com",
            "username": "alicew",
            "message_credits": 100000,
            "last_login_ip": "192.168.1.100",
            "register_date": "2023-05-15T10:30:00Z",
            "login_date": "2024-09-13T08:45:00Z",
            "token": "ey...2X9rSrhDI5KadE5"
        },
        {
            "email": "carlos.garcia@example.com",
            "username": "carlosg",
            "message_credits": 75,
            "last_login_ip": "2001:0db8:85a3:0000:0000:8a2e:0370:7334",
            "register_date": "2024-01-20T14:20:00Z",
            "login_date": "2024-09-12T19:30:00Z",
            "token": ""
        },
        {
            "email": "emma.brown@example.com",
            "username": "emmab",
            "message_credits": 150,
            "last_login_ip": "",
            "register_date": "2022-11-03T09:15:00Z",
            "login_date": "2024-09-13T11:00:00Z",
            "token": ""
        }
    ]
}
```
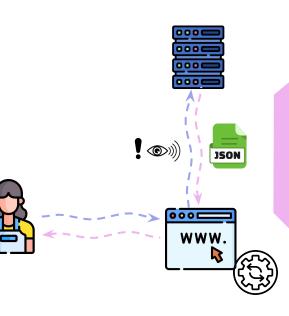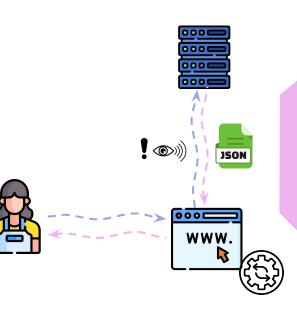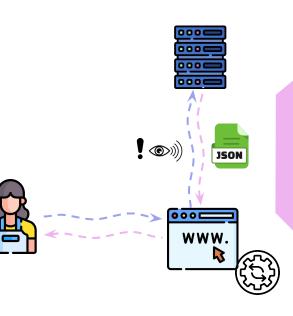
Wait what is that?


```json
{
    "users": [
        {
            "email": "alice.wong@example.com",
            "username": "alicew",
            "message_credits": 100000,
            "last_login_ip": "192.168.1.100",
            "register_date": "2023-05-15T10:30:00Z",
            "login_date": "2024-09-13T08:45:00Z",
            "token": "ey...2X9rSrhDI5KadE5"
        },
        {
            "email": "carlos.garcia@example.com",
            "username": "carlosg",
            "message_credits": 75,
            "last_login_ip": "2001:0db8:85a3:0000:0000:8a2e:0370:7334",
            "register_date": "2024-01-20T14:20:00Z",
            "login_date": "2024-09-12T19:30:00Z",
            "token": ""
        },
        {
            "email": "emma.brown@example.com",
            "username": "emmab",
            "message_credits": 150,
            "last_login_ip": "",
            "register_date": "2022-11-03T09:15:00Z",
            "login_date": "2024-09-13T11:00:00Z",
            "token": ""
        }
    ]
}
```
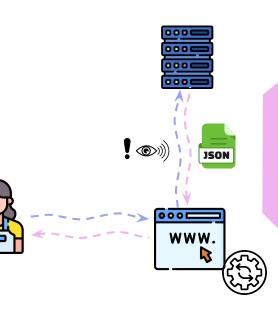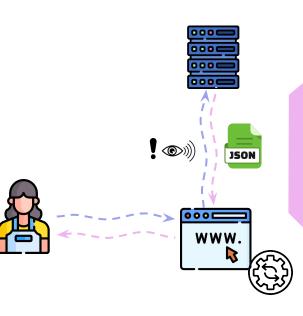
Wait what is that?


```json
{
    "users": [
        {
            "email": "alice.wong@example.com",
            "username": "alicew",
            "message_credits": 100000,
            "last_login_ip": "192.168.1.100",
            "register_date": "2023-05-15T10:30:00Z",
            "login_date": "2024-09-13T08:45:00Z",
            "token": "ey...2X9rSrhDI5KadE5"
        },
        {
            "email": "carlos.garcia@example.com",
            "username": "carlosg",
            "message_credits": 75,
            "last_login_ip": "2001:0db8:85a3:0000:0000:8a2e:0370:7334",
            "register_date": "2024-01-20T14:20:00Z",
            "login_date": "2024-09-12T19:30:00Z",
            "token": ""
        },
        {
            "email": "emma.brown@example.com",
            "username": "emmab",
            "message_credits": 150,
            "last_login_ip": "",
            "register_date": "2022-11-03T09:15:00Z",
            "login_date": "2024-09-13T11:00:00Z",
            "token": ""
        }
    ]
}
```
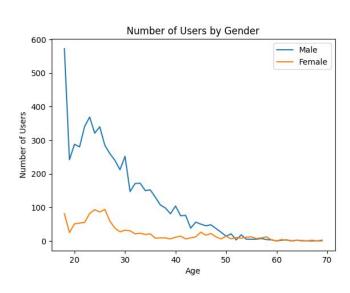
Wait what is that?


```json
{
    "users": [
        {
            "email": "alice.wong@example.com",
            "username": "alicew",
            "message_credits": 100000,
            "last_login_ip": "192.168.1.100",
            "register_date": "2023-05-15T10:30:00Z",
            "login_date": "2024-09-13T08:45:00Z",
            "token": "ey...2X9rSrhDI5KadE5"
        },
        {
            "email": "carlos.garcia@example.com",
            "username": "carlosg",
            "message_credits": 75,
            "last_login_ip": "2001:0db8:85a3:0000:0000:8a2e:0370:7334",
            "register_date": "2024-01-20T14:20:00Z",
            "login_date": "2024-09-12T19:30:00Z",
            "token": ""
        },
        {
            "email": "emma.brown@example.com",
            "username": "emmab",
            "message_credits": 150,
            "last_login_ip": "",
            "register_date": "2022-11-03T09:15:00Z",
            "login_date": "2024-09-13T11:00:00Z",
            "token": ""
        }
    ]
}
```
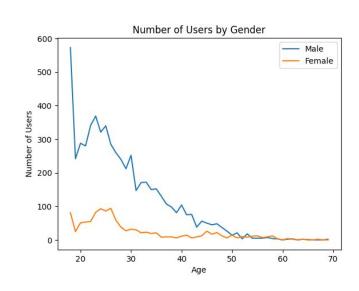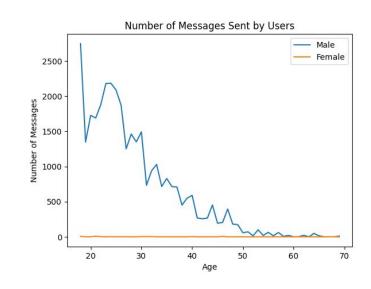
Wait what is that?


```json
{
    "users": [
        {
            "email": "alice.wong@example.com",
            "username": "alicew",
            "message_credits": 100000,
            "last_login_ip": "192.168.1.100",
            "register_date": "2023-05-15T10:30:00Z",
            "login_date": "2024-09-13T08:45:00Z",
            "token": "ey...2X9rSrhDI5KadE5"
        },
        {
            "email": "carlos.garcia@example.com",
            "username": "carlosg",
            "message_credits": 75,
            "last_login_ip": "2001:0db8:85a3:0000:0000:8a2e:0370:7334",
            "register_date": "2024-01-20T14:20:00Z",
            "login_date": "2024-09-12T19:30:00Z",
            "token": ""
        },
        {
            "email": "emma.brown@example.com",
            "username": "emmab",
            "message_credits": 150,
            "last_login_ip": "",
            "register_date": "2022-11-03T09:15:00Z",
            "login_date": "2024-09-13T11:00:00Z",
            "token": ""
        }
    ]
}
```
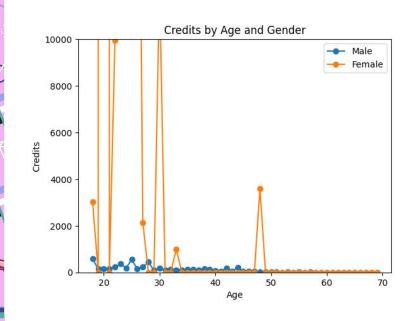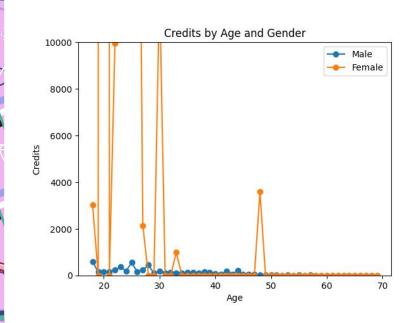
We have the data

Number of Users by Gender

We have the data

Number of Users by Gender

Number of Messages Sent by Users

We have the data

Credits by Age and Gender

We have the data

Credits by Age and Gender

We have the data

Number of Users Created Over Time by Gender

We have the data

Male vs Female
- Female: 10.2%
- Male: 89.8%

Male - Normal vs Bot
- Bot: 0.4%
- Normal: 99.6%

Female - Normal vs Bot
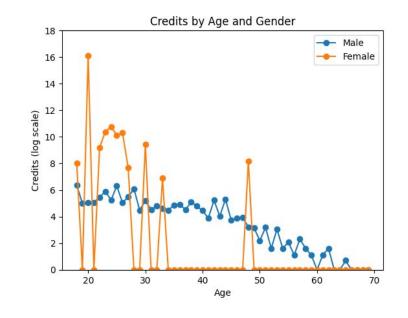- Normal: 27.8%
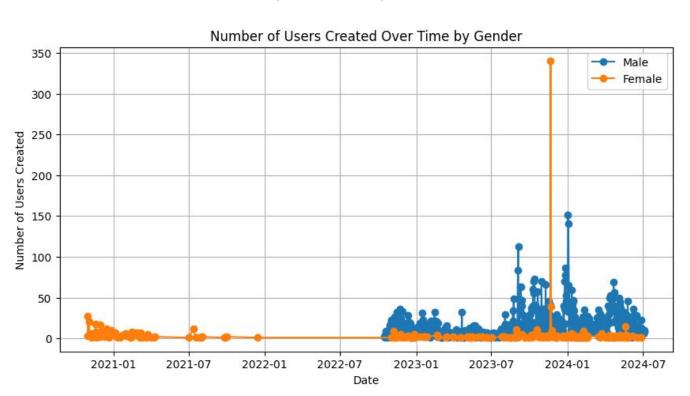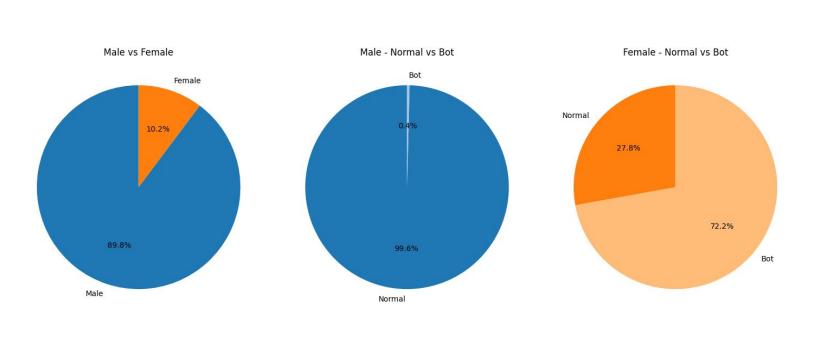- Bot: 72.2%

Thanks!

Any Questions?

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Website: pengrey.com